

**ATTACHMENT 1**  
**KONICA MINOLTA TECHNOSEARCH CO., LTD.**

2005/07/06

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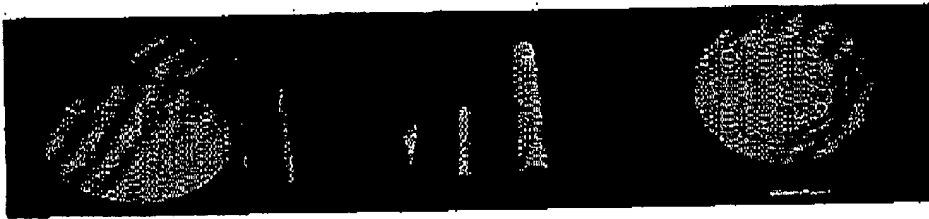
P6214-001-0000

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**ATTACHMENT**

Tokuyama Aluminum nitride (AlN) home page:

Uniform quality, large-sized AlN ceramics. You can select two grades of pressed sintered products to meet your needs.

**Properties**

	Grade	Grade	SA-15	SA-30
General	Purity (Al + N)	%	γ = 94.0	γ = 99.0
	Purity (Al + N + O)	%	γ = 94.8	γ = 99.9
	Density	g/cm <sup>3</sup>	3.33	3.24
Electrical	Volume Resistivity	Ω·cm	1.1×10 <sup>14</sup>	3.1×10 <sup>13</sup>
	Dielectric Constant (RT, 1MHz)		9.1	8.9
	Dielectric Loss (RT, 1MHz)		3.0×10 <sup>-4</sup>	2.8×10 <sup>-4</sup>
	Withstand Strength	(kV/mm)	31.3	18.7
Thermal	Thermal Expansion Coefficient	(K <sup>-1</sup> )	4.3×10 <sup>-6</sup>	3.9×10 <sup>-6</sup>
	Thermal Conductivity at 20°C	W/(m·K)	184	86
	Thermal Conductivity at 700°C	W/(m·K)	159	-

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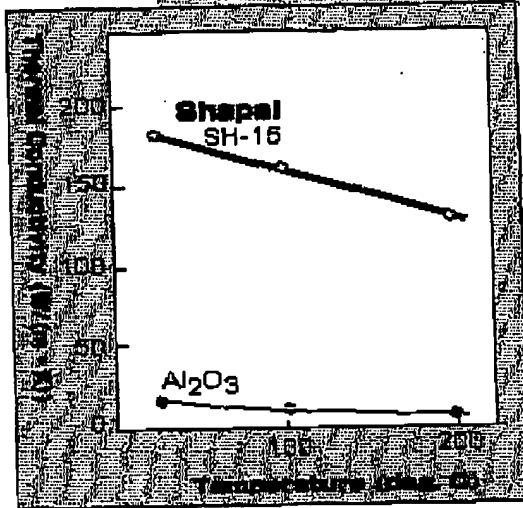
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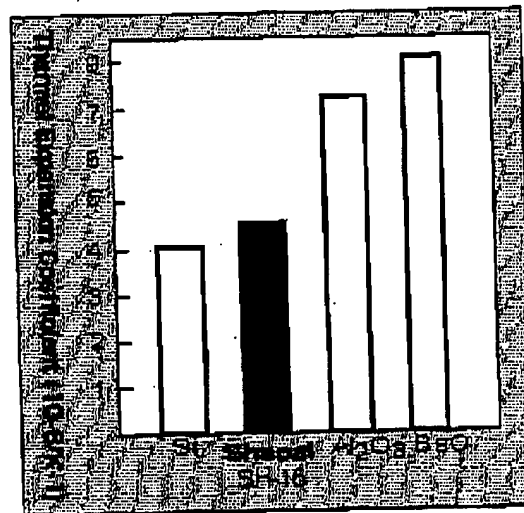
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Mechanical: Bending Strength  
Values are typical, not a guarantee.  
For more details, please contact us.  
Poisson's Ratio

MPa	357	356
GPa	322	320
	0.24	0.24



**Fig 1:**  
**Thermal Conductivity by**  
**Temperature**



**Fig 2:**  
**Thermal Expansion coefficient.**